

#5

1/6

FIG. 1a

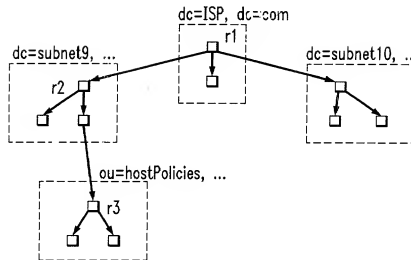
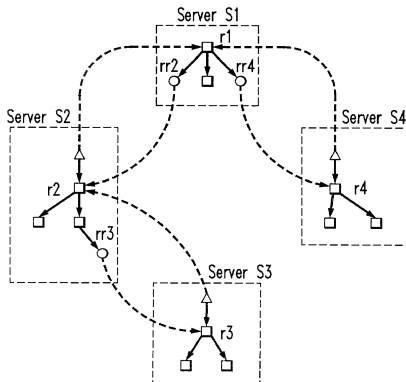


FIG. 1b



2/6

FIG. 2a

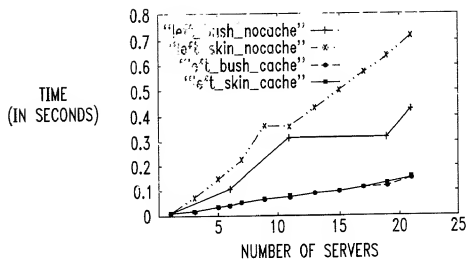
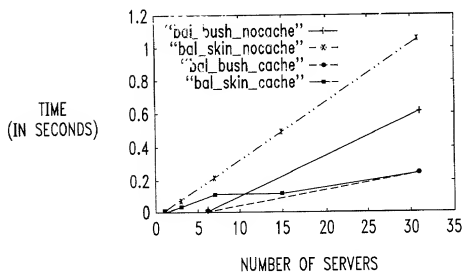
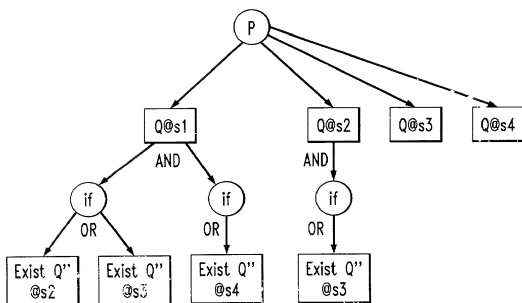


FIG. 2b

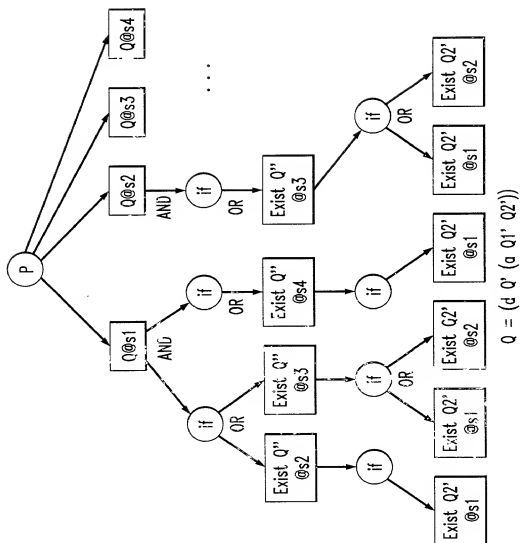


3/6

FIG. 3



$$Q = (d \ Q' \ Q'')$$

[illegible]

5/6

FIG. 5

```

Algorithm Schedule(PT) {
  Answer := { }; Pending := { }; Enabled := { };
  for each n in leaves(PT) do computeQueryNode(n);
  while (Enabled ≠ { } OR Pending ≠ { })
    L := chooseForSchedule(Enabled); /* implements a particular scheduling policy */
    for each (Q,S) in L do
      Pending := Pending ∪ {(Q,S)}; LDAP_issueQuery(Q,S);
      LDAP_waitForEvent(e);
      case e.type of
        boolean answer for Q@S: Pending := Pending − {(Q,S)};
          storeCache(Q,S,e.value);
          for n in getCacheWaitinglist(Q,S) do {
            n.value := e.value;
            computeConditionalNode(n.parent); }
        directory entry for Q@S: Answer := Answer ∪ {e.value};
        End-of-Entries for Q@S: Pending := Pending − {(Q,S)};
      return Answer;

function computeQueryNode(n) {
  if all n's children are computed then
    Q := generateQueryExpression(n.Query); /* expands all if-macros*/
    S := n.Server; v := getCache(Q,S);
    case v of
      INEXISTENT:    insertCache(Q,S, Pending);
                     Enabled := Enabled ∪ {(Q,S)};
                     addCacheWaitingList(Q,S,n);
      Pending       addCacheWaitingList(Q,S,n);
      TRUE, FALSE:  n.value := v;
                     computeConditionalNode(n.parent)
    }
function computeConditionalNode(n) {
  if (exist p in n.children such that p.value = TRUE) then
    n.value := TRUE; computeQueryNode(n);
  else if (all n's children are computed) then
    n.value := FALSE; computeQueryNode(n.parent);
  }
}

```

6/6

FIG. 6

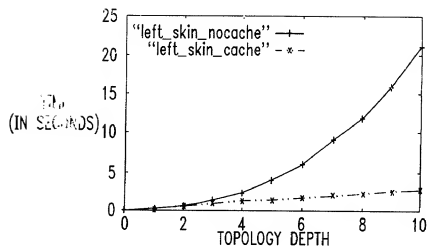


FIG. 7a

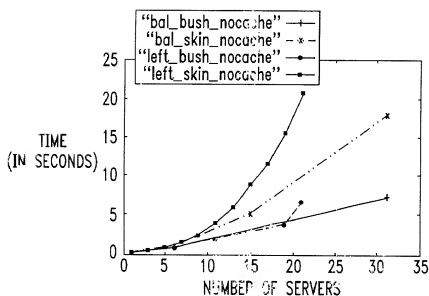


FIG. 7b

